



SAFETY DATA SHEET

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DiPel 2X Biological Insecticide Dry Flowable

SDS# VBC-0370 Revision 1

ISSUED 04/30/18

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: DiPel 2X Biological Insecticide Dry Flowable

Synonyms: None

PCP Reg No.: 26508

Code Number: 15639

List Number: 05209, 11379, 60185

Chemical Family: Microbial, Btk strain ABTS-351

Substance Registration Number(s)[REACH]: N/A

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Agricultural Insecticide

Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences LLC
870 Technology Way
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

None

2.2 Labeling Elements

Symbol(s)

None

Signal Word

WARNING

Hazard Statement(s)

None



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Precautionary Statement:**Prevention**

Wash hands and face thoroughly after handling

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.3 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> strain ABTS-351 fermentation solids, spores, and insecticidal toxins	57.0
Trade Secret	Other ingredients	43.0

4. FIRST AID MEASURES**4.1 Description of First Aid Measures****GENERAL:** In all cases of doubt, seek medical attention.**EYES:** Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.**SKIN:** Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. Cover irritated skin with an emollient. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.**INGESTION:** Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. Give large quantities of water. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.**INHALATION:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call

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911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed**Acute**

Eye irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES**5.1 Extinguisher Media****Suitable Extinguisher Media**

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

None known

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters**Protective Equipment and precautions for firefighters**

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Use in a well-ventilated area. Respiratory protection such as a dust mask should be worn during normal product use. Wear eye protection appropriate to handling activities. Wear

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impervious gloves. Wear appropriate body coverings if contact may occur. Where exposure level is not known, wear respirator protection suitable for expected level of exposure, in addition to the personal protection as recommended in Section 8.

6.2 Environmental Precautions

Keep out of drains, sewers, ditches and waterways. Avoid runoff to waterways and sewers. Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up

Ventilate area. Wear appropriate personal protective equipment. Recover product and place into appropriate container for disposal. Do not flush to sewer. Avoid generating dust.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

7. HANDLING AND STORAGE**7.1 Precautions for Safe handling**

Ventilate. Avoid breathing dust or vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping. For filling operations, respiratory protection may be recommended particularly in enclosed areas.

7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Close containers of unused material. Store in a dry, cool, ventilated place, away from direct sunlight.

Incompatibilities

None Known

7.3 Specific End Use(s)

Agricultural insecticide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control Parameters****Component Exposure Limits**

None

Derived No Effect Levels (DNELs)

No DNELs available



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Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls

Provide general ventilation. Where adequate general ventilation is unavailable use process enclosure, local exhaust ventilation, or other engineering controls

SKIN PROTECTION:

Wear protective clothing, including boots and gloves. Wear gloves made of impervious materials. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

RESPIRATORY PROTECTION:

For filling operations if dust/mist is produced respiratory protection is recommended or where respiratory protection is warranted, use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter). Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Mustard brown	Odor:	Not Determined
pH:	4.1 (1% suspension)	Odor Threshold:	Not Determined
Melting Point:	Not Determined	Initial Boiling Point & Range:	Not Determined
Flash Point:	Not Determined	Solubility (H ₂ O):	Not Determined
Density:	0.456 g/ml	Evaporation Rate:	Not Determined
Octanol/H ₂ O Coeff:	Not Determined	Decomposition Temp.:	Not Determined
Auto Ignition:	Not Determined	Vapor Pressure:	Not Determined
Vapor Density:	Not Determined	Flammability:	Not Determined
Kinematic Viscosity:	Not Determined		

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity

Material does not pose a significant reactivity hazard.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.



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10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known

10.5 Incompatible Materials

None known

10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION**11.1 Information on Toxicological Effects**Likely Routes of Exposure

Inhalation: Yes

Eye Contact: Yes

Skin Contact: Yes

Ingestion: Not likely

Product (or TGA) where noted) ToxicologyAcute EffectsOral Toxicity: LD₅₀ > 5,000 mg/kg (rat)Dermal Toxicity: LD₅₀ > 2,020 mg/kg (rabbit)Inhalation Toxicity: LC₅₀ rat (4 hours): > 5.15 mg/L

Corrosiveness: Not corrosive.

Dermal Irritation: Mild to slightly-irritating

Ocular Irritation: Not irritating

Dermal Sensitization: Not a sensitizer (guinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens.

Carcinogenicity Information: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.

Developmental/Reproductive Toxicity: This material is not teratogenic

Special Target Organ: Not Applicable

Aspiration Hazard: Not Applicable

Repeat Dose Studies: Not Applicable, Acute Toxicity testing was all negative

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity (Data for a Concentrated Technical Powder)**

Do not allow into waterways or lakes.

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Fish: $LC_{50} > 2.87 \times 10^7$ cfu/L (96-H, Rainbow Trout)Bird: $LC_{50} > 2857$ mg/kg (5.7×10^{10} cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)Invertebrates: $EC_{50} > 50$ mg/L (48-Hr) (Daphnia)
21-day NOEC > 5.0 mg/L (Daphnia)

Honeybee: Essentially Nontoxic to honeybee

12.2 Persistence and Degradability

No data available

12.3 Bioaccumulation potential

No data available

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB assessment

Assessments not performed

12.6 Other adverse effects

None known

13. DISPOSAL CONSIDERATIONS**13.1 Waste Disposal Methods**

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

14. TRANSPORTATION INFORMATIONDOT

STATUS: Not regulated for domestic ground transport by US DOT

UN PROPER SHIPPING NAME: N/A

REMARKS: N/A

IATA/ICA0

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

REMARKS: N/A

IMDG

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

REMARKS: N/A

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15. REGULATORY INFORMATION**15.1 Safety, Health and Environmental Regulations / Specific Legislation**

TSCA STATUS: Exempt

CERCLA STATUS: Not regulated as hazardous

SARA STATUS: Acute: No Chronic: No Fire: No CDT: No

RCRA STATUS: Not regulated as hazardous

State Right-To-Know: Not Listed

Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 PMRA Pesticide Regulations

PCP Number: 26508

Product must have PMRA Approved Pesticide Label attached to or accompanying all containers.

CAUTION EYE IRRITANT

CAUTION SKIN IRRITANT

POTENTIAL SENSITIZER

KEEP OUT OF REACH OF CHILDREN

Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wear a long-sleeved shirt, long pants, shoes and socks, eye goggles, and NIOSH approved respirator with any N-95, R95 or P-95 filter for biological products when handling, mixing/loading or applying the product and during all clean-up and repair activities. When applicators use closed systems (e.g. enclosed cabs) the personal protective equipment may be reduced or modified. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

STORAGE:

In order to ensure microbial purity and potency DiPel 2X DF Biological Insecticide should be stored in the original container at 0 to 25°C and use within 24 months of the date of manufacture. Store container upright and keep tightly closed when not in use.

DISPOSAL

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instruction for any required additional cleaning of the container prior to its



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disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

16. OTHER INFORMATION

NFPA Hazard Ratings

HMIS Hazard Ratings

Health: 1
Flammability: 0
Instability: 0

Health: 1
Flammability: 0
Instability: 0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Extreme

REASON FOR ISSUE: Correct PCP# in Section 15
APPROVAL DATE: 04/30/18
SUPERSEDES DATE: 04/13/18

LEGEND: N/A = Not Applicable
N/L = Not Listed
C = Ceiling
(R) = Registered Trademark of Valent BioSciences LLC
(TM) = Registered Trademark of Valent BioSciences LLC
N/D = Not Determined
L = Listed
S = Short-term

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information



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specifically for product use in the ordinary course. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use a pesticide product in any manner inconsistent with its labeling.



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